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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,472	12/07/2004	Joachim Wilhelm Hellmig	NL 020561	6125
24737 7590 07/25/2007 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			EXAMINER HEYI, HENOK G	
			ART UNIT 2609	PAPER NUMBER
			MAIL DATE 07/25/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/517,472	Applicant(s) HELLMIG ET AL.	
	Examiner Henok G. Heyi	Art Unit 2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. The claims are objected to because they include reference characters which are not enclosed within parentheses.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

In claim one, there are multiple references to Fig. 1 from the specification. Applicant is advised to take that out and rewrite the claim without mentioning "Fig. 1".

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claim 1, 3, 4 and 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Kojima et al EP 1172811 A2 (Kojima hereinafter).**

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Re claim 1, a dual-stack optical data storage medium for at least read out using a focused radiation beam with a wavelength λ , between 400nm and 410nm (light of a wavelength in a range of 390nm to 430nm, para [0046]) and an Numerical Aperture (NA) between 0.84 and 0.86 (lens with a numerical value of 0.85, para [0046]), entering through an entrance face of the medium during read out (with a laser beam incident from the first substrate, para [0044]), comprising: a substrate with present on a side thereof (disk shaped transparent substrate, para [0045]); a first stack of layers named L0 comprising a first information layer (the first information layer includes a dielectric layer, an interface layer and a reflective layer, para [0047]), a second stack of layers named L1, comprising a second information layer, L1 being present at a position closest to the entrance face and L0 more remote from the entrance face than L1, a radiation beam transparent spacer layer between L0 and L1, a radiation beam transparent cover layer between the entrance face and L1 (a second information layer disposed between the first information layer and a second substrate and an intermediate layer disposed between the first information layer and the second information layer, para [0044]) a transmission stack named TS0 with a thickness d_{TS0} and an effective refractive index n_{TS0} containing all layers between L0 and the entrance face (as the first substrate becomes thinner, the numerical aperture of an objective lens can be increased, para [0046]), a transmission stack named TS1 with a thickness d_{TS1} and an effective refractive index n_{TS1} containing all layers between L1 and the entrance face (the thickness of the second substrate, [0046]), characterized in that the spacer layer has a thickness selected from the range 20 - 30 μ m (the thickness of the intermediate layer

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should be between $1\mu\text{m}$ and $50\mu\text{m}$, para [0075]), the thickness $d_{\text{TS}0}$ in dependence on the refractive index $n_{\text{TS}0}$ is within the upper shaded area in Fig.1 and the thickness $d_{\text{TS}1}$ in dependence on the refractive index $n_{\text{TS}0}$ is within the lower shaded area in Fig.1. (the thickness of the intermediate layer should be between $1\mu\text{m}$ and $50\mu\text{m}$, para [0075]).

Re claim 3, An optical data storage medium according to claim 1, wherein $n_{\text{TS}0}$ and $n_{\text{TS}1}$ both have a value of 1.6 ($1.7 \leq n_{\text{TS}} < 2.5$, para [0052]) and the following conditions are fulfilled: $95\mu\text{m} < d_{\text{TS}0} < 105\mu\text{m}$ and $70\mu\text{m} < d_{\text{TS}1} < 80\mu\text{m}$ (the thickness of the substrates preferably in a range of $10\mu\text{m}$ to $700\mu\text{m}$, para [0046]).

Re claim 4, an optical data storage medium according to any one of claims 1, wherein the spacer layer thickness is $25\mu\text{m}$ or substantially close to $25\mu\text{m}$ and the cover layer thickness is $75\mu\text{m}$ or substantially close to $75\mu\text{m}$ (the thickness of the intermediate layer is in the range from $1\mu\text{m}$ to $50\mu\text{m}$, para [0075]).

Re claim 5, use of an optical data storage medium as claimed in claim 1, for reliable data read out from both the first information layer and the second information layer (first information layer and second information layer, para [0043] to [0047]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al EP 1172811 A2 (Kojima hereinafter) as applied to claim 1 above, and further in view of Spruit et al. US 2001/0030932 A1 (Spruit hereinafter) and Yukumoto et al. US 2001/0053122 A1 (Yukumoto hereinafter).**

Re claim 2, Kojima teaches a dual stack optical data storage medium but it doesn't specify about the radius of the medium. However, Spruit discloses the size of the radius for DVD-ROM to be from 22.3 to 23.5mm (Spruit para [0006]). Still, both Kojima and Spruit fail to specify clearly the maximum deviation of the thickness of the layers.

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However, Yukumoto teaches that the deviation of the thickness has to be limited to 2.3 μ m (Yukumoto para [0031]). Therefore, the combined teaching of Kojima, Spruit and Yukumoto as a whole would have rendered obvious to have a dual disc with the given size of radius and deviation range of the stack thickness.

Examiner's Note

The referenced citations made in the rejection(s) above are intended to exemplify areas in the prior art document(s) in which the examiner believed are the most relevant to the claimed subject matter. However, it is incumbent upon the applicant to analyze the prior art document(s) in its/their entirety since other areas of the document(s) may be relied upon at a later time to substantiate examiner's rationale of record. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

However, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henok G. Heyi whose telephone number is (571) 272-1816. The examiner can normally be reached on Monday to Friday 7:30 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on (571) 272-7332. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HGH


VU LE
SUPERVISORY PATENT EXAMINER